#5/Letter to Draftsman
T. Hoekstra
11/17/00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: LAEMMLE, B., et al. : :Atty Dkt. No.: 99 P 7475 US01

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For: MONIKER METHOD, APPARATUS, SYSTEM AND ARTICLE OF MANUFACTURE :Date: August 24, 2000

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LETTER TO THE OFFICIAL DRAFTSMAN

S I R:

Transmitted herewith are ten (10) sheets of Formal Drawings for the above-identified application.

Applicant's undersigned attorney may be reached in our Iselin, New Jersey office by telephone at (732) 321-3009. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

I. Marc Asperas
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Dated: August 24, 2000

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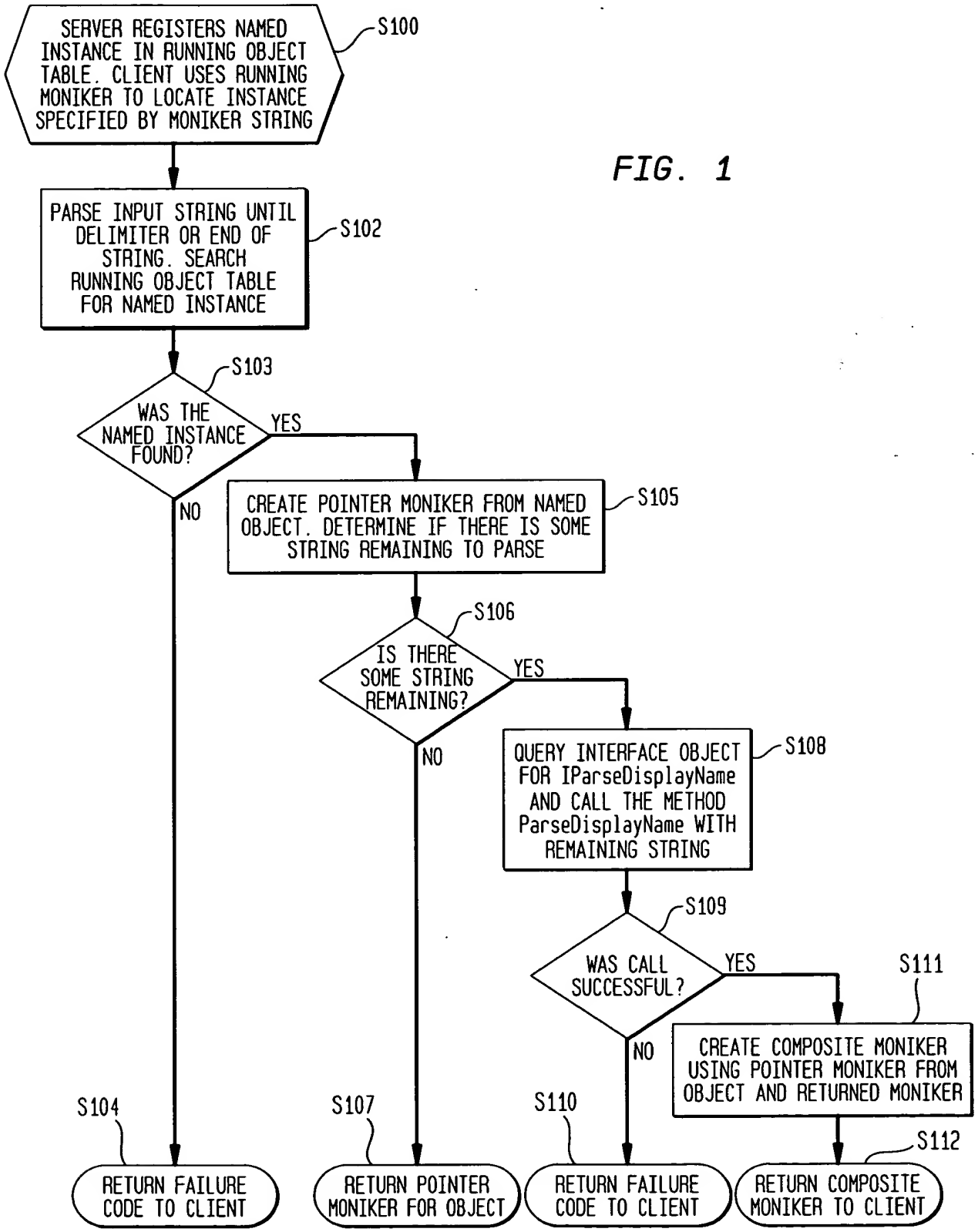

SERVER REGISTERS NAMED INSTANCE IN RUNNING OBJECT TABLE. CLIENT USES RUNNING MONIKER TO LOCATE INSTANCE SPECIFIED BY MONIKER STRING
S100
PARSE INPUT STRING UNTIL DELIMITER OR END OF STRING. SEARCH RUNNING OBJECT TABLE FOR NAMED INSTANCE
S102
S103
WAS THE NAMED INSTANCE FOUND?
YES
NO
CREATE POINTER MONIKER FROM NAMED OBJECT. DETERMINE IF THERE IS SOME STRING REMAINING TO PARSE
S105
S106
IS THERE SOME STRING REMAINING?
YES
NO
QUERY INTERFACE OBJECT FOR IParseDisplayName AND CALL THE METHOD ParseDisplayName WITH REMAINING STRING
S108
S109
WAS CALL SUCCESSFUL?
YES
NO
S111
CREATE COMPOSITE MONIKER USING POINTER MONIKER FROM OBJECT AND RETURNED MONIKER
S112
S104
RETURN FAILURE CODE TO CLIENT
S107
RETURN POINTER MONIKER FOR OBJECT
S110
RETURN FAILURE CODE TO CLIENT
RETURN COMPOSITE MONIKER TO CLIENT

FIG. 1

FIG. 2A

Running.idl

```
// Running.idl : IDL source for Running.dll
//

// This file will be processed by the MIDL tool to
// produce the type library (Running.tlb) and marshalling code.

import "oaidl.idl";
import "ocidl.idl";

      [
            object,
            uuid(E7531917-289D-11D2-869F-080009DC2552),
            dual,
            helpstring ("IRunning Interface"),
            pointer_default (unique)
      ]
      interface IRunning : IDispatch
      [
            [id(1), helpstring("method RegisterInstanceName")] HRESULT RegisterInstanceName (BSTR bstr
ItemName, IUnknown * pUnk, long * lCookie);
            [id(2), helpstring("method UnregisterInstanceName")] HRESULT UnregisterInstanceName(long
lCookie);
      );
[
      uuid(E7531908-289D-11D2-869F-080009DC2552),
      version(1.0),
      helpstring ("Running 1.0 Type Library")
]
library RUNIINGLib
{
      importlib("stdole32.tib");
      importlib("stdole2.tib");

      [
            uuid(E7531918-289D-11D2-869F-080009DC2552),
            helpstring("Running Class")
      ]
      coclass Running
      [
            [default] interface IRunning;
            interface IparseDisplayName;
      );
);
```

FIG. 2B

Running.rgs

```
HKCR
{
	Running.1 = s 'Running Class'
	{
		CLSID = s '{E7531918-289D-11D2-869F-080009DC2552}'
	}
	Running = s "Running Class"
	{
		CLSID = s ;{E7531918-289D-11D2-869F-080009DC2552}"
	}
	NoRemove CLSID
	{
		ForceRemove {E7531918-289D-11D2-869F-080009DC2552} = s 'Running Class'
		{
			val AppID = s '{E7531918-289D-11D2-869F-080009DC2552}'
			ProgID = s 'Running.1'
			VersionIndependantProgID = s 'Running'
			ForceRemove 'Programmable'
			InprocServer32 = s "%MODULE%"'
			{
				val ThreadingModel = s 'Apartment'
			}
		}
	}
	NoRemove AppID
	{
		NoRemove {E7531918-289D-11D2-869F-080009DC2552} = s 'Running Class'
		{
			 val DllSurrogate = s''
		}
	}
}
```

CRunning.h

FIG. 2C

```
// CRunning.h : Declaration of the CRunning
#ifndef_RUNNING_H_
#define_RUNNING_H_
#include "resource.h"          // main symbols
////////////////////////////////////////////////////////////////////////////
// CRunning
class ATL_NO_VTABLE CRunning :
      public CComObjectRootEx<CComSingleThreadModel>,
      public CComCoClass<CRunning, &CLSID_Running>,
      public IDispatchImpl<IRunning, &IID_IRunning, &LIBID_RUNNINGLib>,
      public IParseDisplayName
{
public:
      CRunning()
      {
            ATLTRACE(_T("CRunning() constructor called\n"));
      }
      virtual -CRunning()
      {
            ATLTRACE(_T("CRunning() destructor called\n"));
      }
DECLARE_REGISTRY_RESOURCEID(IDR_RUNNING)
BEGIN_COM_MAP(CRunning)
      COM_INTERFACE_ENTRY(IRunning)
      COM_INTERFACE_ENRTY(IDispatch)
      COM_INTERFACE_ENTRY(IparseDisplayName)
END_COM_MAP()
////////////////////////////////////////////////////////////////
//IParseDisplayName method
      STDMETHODIMP ParseDisplayName(IBindCtx *pbc
                                                ,LPOLESTR pszDisplayName
                                                ,ULONG *pchEaten
                                                ,IMoniker **ppmkOut
                                                );
protected:
      const wchat_t* ProgID() { return L"Running"; }
  const wchar_t* VersionIndependantProgID() { return L"Running.1"; }
// IRunning
public:
      STDMETHOD(RegisterInstanceName) (long lCookie);
      STDMETHOD(UnregisterInstanceName) BSTR bstrItemName, IUnknown * pUnk, long * lCookie);
};
#endif //_RUNNING_H_
```

FIG. 2D

```
// CRunning.cpp : Implementation of CRunning
#include "stdafx.h"
#include "Running.h"
#include "CRunning.h"
#define BAD_POINTER_RETURN(p) if(!P)return E_POINTER
#define BAD_POINTER_RETURN_OR_ZERO(p) if(!P)return E_POINTER; else *p = 0
#define SIZE_OF_STRING(p) !p ? 0 : ((wcslen(p) * sizeof(wchar_t)) + sizeof(wchar_t))
#define OLE_MAXNAMESIZE 256
////////////////////////////////////////////////////////////////////////////
// CRunning
STDMETHODIMP CRunning::RegistrationInstanceName(BSTR bstrItemName, IUnknown * pUnk, long * lCookie)
{
	AFT_MANAGE_STATE(AfxGetStaticModuleState())
	// TODO: Add your implementation code here
	ATLTRACE(_T("CRunning::RegisterInstanceName called\n"));
	HRESULT hr = E_FAIL;
	LPRUNNINGOBJECTTABLE prot = NULL;
	hr = GetRunningObjectTable(0,&prot);
	if(SUCCEEDED(hr))
	{
		LPMONIKER	ppmk = NULL;
		hr = CreateItemMoniker(NULL,bstrItemName,&ppmk);
		if(SUCCEEDED(hr))
		{
			hr = prot->Register(0
							,pUnk
							,ppmk
							,(unsigned long *)lCookie
							);
			if(SUCCEEDED(hr))
			{
				TRACE(_T("CRunning::RegisterInstanceName register succeeded cookie is %x\
n"),(unsigned long*)*lCookie);
			}
			else
			{
				TRACE(_T("CRunning::RegisterInstanceName register failed %x \n"),hr);
			}
			ppmk->Release();
		}
		else
		{
			TRACE(_T("CRunning::RegisterInstanceName CreateItemMoniker failed %x \n"),hr);
		}
		prot->Release();
	}
	else
	{
		TRACE(_T("CRunning::RegisterInstanceName get ROT failed %x \n"),hr);
	}
	return hr;
}
STDMETHODIMP CRunning::UnregisterInstanceName (long lCookie)
{
	AFX_MANAGE_STATE(AfxGetStaticModuleState())
	// TODO: Add your implementation code here
	HRESULT hr = E_FAIL;
```

CRunning.cpp

FIG. 2E

```
    if(lCookie)
    {
        LPRUNNINGOBJECTTABLE   prot = NULL;
        hr = GetRunningObjectTable(0,&prot);
        if(SUCCEEDED(hr))
        {
            hr = prot->Revoke((unsigned long) lCookie);
            if(SUCCEEDED(hr))
            {
                TRACE(_T("CRunning::UnregisterInstanceName worked for cookie %x \n"),(uns
igned long)lCookie);
            }
            else
            {
                ATLTRACE(_T("CRunning::UnregisterInstanceName Revoke failed\n"));
            }
            prot->Release();
        }
        else
        {
            ATLTRACE(_T("CRunning::UnregisterInstanceName GetROT failed\n"));
        }
    }
    return hr;
}

STDMETHODIMP CRunning::ParseDisplayName(
    IBindCtx*    pbc,
    LPOLESTR     pwszDisplayName,
    ULONG*       pchEaten,
    IMoniker**   ppmkOut)
{
    AFX_MANAGE_STATE(AfxGetStaticModuleState())
    ATLTRACE(_T("CRunning::ParseDisplayName() with %S/n"),pwszDisplayName);
    BAD_POINTER_RETURN_OR_ZERO(ppmkOut);
    BAD_POINTER_RETURN_OR_ZERO(pchEaten);
    BAD_POINTER_RETURN(pbc);
    BAD_POINTER_RETURN(pwszDisplayName);
    BAD_POINTER_RETURN(pchEaten);
    ATLTRACE(_T("CRunning::ParseDisplayName() pointers OK!\n"));
    HRESULT hr =E_FAIL;
    // set to max for now
    // need to change to fit MkParseEx
    if(*pwszDisplayName == L'@')
        * pchEaten = wcslen(L"@Running");
    else
        * pchEaten = wcslen(L"Running");
    // as far as i have been able to find oud
    // MkParse will pass the @, wrong!!
    // oh no!!! MkParseEx doesn't pass the @!!
    // we've got to fix this,  so let's look for ":"
    wchar_t * pwszInstance = wschr(pwszDisplayName,L':');
    // do we have an instance?
    if(pwszInstance)
    {
        ATLTRACE(_T("CRunning::ParseDisplayName() instance name %S/n"),pwszInstance);
        WCHAR          szItemName(OLE_MAXNAMESIZE);
        LPWSTR         lpszDest         = szItemName;
        LPWSTR         lpszSrc          = pwszInstance;
        int                  cEaten = 0;
```

CRunning.cpp

```
// eat delimiter characters until next token
while    (*lpszSrc != L'\0'&& (*lpszSrc == L'\\'|| *lpszSrc == L'/' ||
       *lpszSrc == L ':' || *lpszSrc == L'!' || *lpszSrc == L '('))
{
       ++lpszSrc;
       ++cEaten;
}
// parse next token in szItemName
while (*lpszSrc != L'\0' && *lpszSrc != L'\\' && *lpszSrc != L'/' &&
              *lpszSrc != L':' && *lpszSrc != L'!' && *lpszSrc != L'(' &&
              cEaten < OLE_MAXNAMESIZE-1)
{
       *lpszDest++ = *lpszSrc++;
       ++cEaten;
}
*pchEaten += cEaten;
*lpszDest = 0;
// find the running object
LPRUNNINGOBJECTTABLE     prot = NULL;
LPENUMMONIKER                  penum = NULL;
LPMONIKER                           ppmk = NULL;
hr = CreateItemMoniker(NULL,szItemName,&ppmk);
ATLTRACE(_T("CRunning::ParseDisplayName() CreateItemMoniker %x\n"),hr);
if (SUCCEEDED(hr))
{
      // look in the running object table to find the gizmo
      // since we are a moniker provider we can t use
      // the bind context to get the ROT
      hr = GetRunningObjectTable(0, &prot);
      ATLTRACE(_T("CRunning::ParseDisplayName() GetRunningObjectTable %x\n"),hr);
      if (SUCCEEDED(hr))
      {       hr = prot->EnumRunning(&penum);
            ATLTRACE(_T("CRunning::ParseDisplayName() EnumRunning %x\n"),hr);
            if(SUCCEEDED(hr))
            {
                  IMoniker      *     ppmkTest       = NULL;
                  IMoniker      *     ppmkResult     = NULL;
                  IUnknown      *     pUnk           = NULL;
                  BOOL                bFound         = FALSE;
                  while((penum->Next(1, &ppmkTest, NULL) == S_OK)&&(!bFound))
                  {
                        hr = ppmk->IsEqual (ppmkTest);
                        if(hr == S_OK) // not SUCCEEDED!!
                        {
                              TRACE(_T("CRunning::ParseDisplayName() we found it\n"));
                              bFound = TRUE;
                              hr = prot->GetObject (ppmkTest, &pUnk);
                              if(hr == S_OK) // not SUCCEEDED!!
                              {
                                    TRACE(_T("CRunning::ParseDisplayName() we got it")');
                                    hr = CreatePointerMoniker (pUnk, &ppmkResult);
                                    if(SUCCEEDED(hr))
                                    {
                                          TRACE(_T("CRunning::ParseDisplayName() created pointer moniker\n"));
                                          IParseDisplayName       * pParse = NULL;
                                    IMonikerpItem                           Moniker = NULL;
                                    ULONG                                   ucEaten
```

FIG. 2F

FIG. 2G

CRunning.cpp

```
s correct
s to with it



(IID_IParseDisplayName, (void **)&Parse);

eDisplayName(pbc, lpszSrc,&ucEaten, &pItemMoniker);

+= ucEaten;
Result->ComposeWith(pItemMoniker, FALSE, ppmkOut);
DED(hr))

RACE(_T("CRunning::ParseDisplayName() It worked!!!\n"));
/ we can release the constituant elements
/ of the composite
pmkResult->Release();
succeed or fail we can release the
oniker
ker->Release();
;
                                                    )
                                                )
                                            )
                                            ppmkTest->Release();
                                        )
                                        if(lbFound)
                                        {
                                            hr = E_FAIL;
                                        }
                                        penum->Release();
                                    )
                                    prot->Release();
                                }
                                ppmk->Release();
                            )
                        )
                    return hr;
                )
// we'll give him the part that i
// and he can do whatever he want
*ppmkOut = ppmkResult;
// is there any string to parse?
if(*lpszSrc != L'\0')
{
        hr = pUnk->QueryInterface
        if(SUCCEEDED(hr))
        {
            hr = t pParse->Pars
            if(SUCCEEDED(hr))
            {
                *pchEaten
                hr = ppmk
                if(SUCCEE
                {
                    T
                    /
                    /
                    p
                }
                // if we
                // item m
                pItemMomi
            }
            pParse->Release()
        }
    }
```

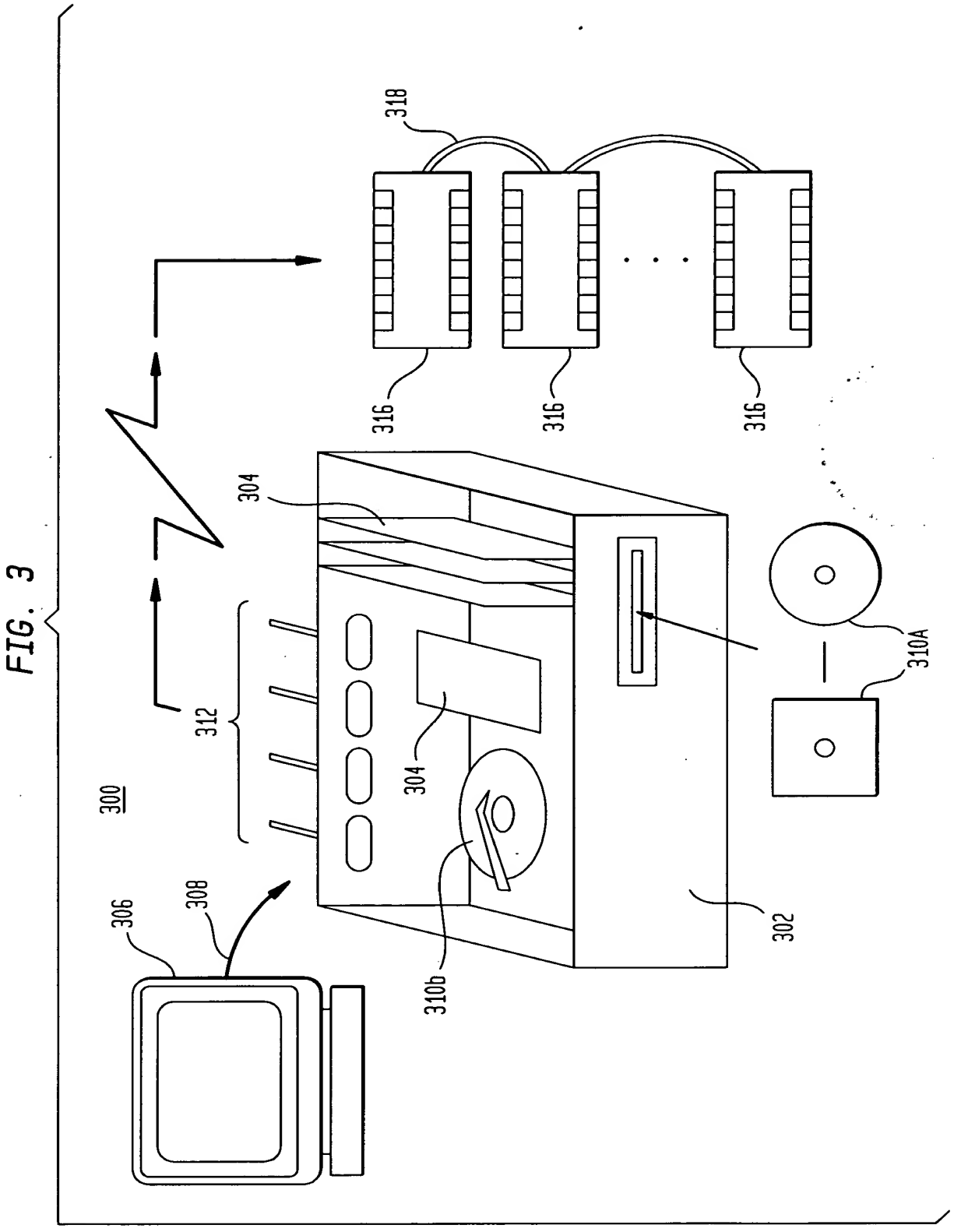
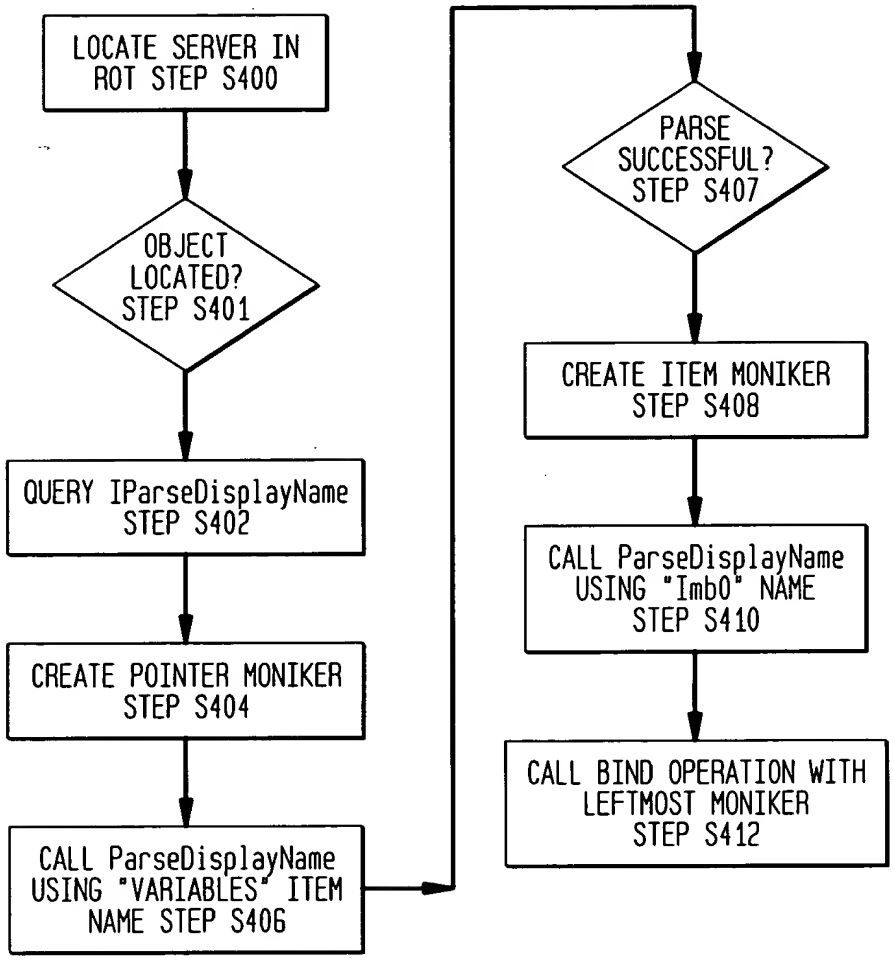


FIG. 3

FIG. 4


LOCATE SERVER IN ROT STEP S400
OBJECT LOCATED? STEP S401
QUERY IParseDisplayName STEP S402
CREATE POINTER MONIKER STEP S404
CALL ParseDisplayName USING "VARIABLES" ITEM NAME STEP S406
PARSE SUCCESSFUL? STEP S407
CREATE ITEM MONIKER STEP S408
CALL ParseDisplayName USING "Imb0" NAME STEP S410
CALL BIND OPERATION WITH LEFTMOST MONIKER STEP S412